

## REMARKS

Claims 1–60 are pending in the present application. Claims 1, 5-8, 11-13, 18, 21, and 56-58 have been amended leaving Claims 1-60 for consideration upon entry of the present Amendment. Support for the amendments can at least be found in the specification and the drawings as originally filed. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims is respectfully requested in view of the above amendments and the following remarks.

### Specification

The title is allegedly “not descriptive” and a “new title is required that is clearly indicative of the invention to which the claims are directed”. Although Applicants continue to contend that the original title is “clearly indicative of the invention to which the claims are directed”, in order to facilitate prosecution of the present application, the title is hereby amended as suggested by the Examiner. Reconsideration and withdrawal of this objection are requested.

### Information Disclosure Statement (PTO-1449)

The Applicants have submitted Information Disclosure Statements (IDSs) on March 13, 2003 and June 13, 2003, including PTO form 1449s. These art cited in the IDSs has not been considered by the Examiner and initialed copies of the PTO 1449 forms have not been received by the Applicants. Applicants request that the Examiner consider the art cited in the IDSs and provide Applicant with initialed PTO 1449 forms.

### Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1, 5 - 7, and 11 – 59 continue to stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,538,774 to Landin et al.; and as allegedly unpatentable over JP 02-096921 (JP ‘921; abstract only) in view of Landin et al.

Claims 2, 8 – 10, and 60 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Landin et al. in further view of U.S. Patent No. 6,127,017 to Hirata et al.; as allegedly unpatentable over JP ‘921 in view of Landin et al., and in further view of U.S. Patent No. 6,127,017 to Hirata et al.; as allegedly unpatentable over Chang in further view of Hirata et

al.; and as allegedly unpatentable over JP '817 in view of Landin et al., and further in view of Hirata et al.

Claim 3 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Landin et al. in view of Yamashita et al.; as allegedly unpatentable over JP '921 in view of Landin et al., and in further view of Yamashita et al.; as allegedly unpatentable over Chang in view of Yamashita et al.; and as allegedly unpatentable over JP '817 in view of Landin, and in further view of Yamashita et al.

Claim 4 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,538,774 to Landin et al. in view of U.S. Patent No. 6,156,422 to Wu et al.; as allegedly unpatentable over JP '921 in view of Landin et al., and in further view of Wu et al.; and as allegedly unpatentable over JP '817 in view of Landin et al., and further in view of Wu et al.

Claims 1, 4 - 7, 11-31, 33-36, 39, 42, 45, 46, 48, 51-53, and 56-59 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 6,433,964 B1 to Chang.

Claims 32, 37, 38, 40, 41, 43, 44, 47, 49, 50, 54, and 55 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Chang, and in further view of Landin et al.

Claims 1, 5 - 7, 11-30, 32, 33 and 37-59 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over JP 63-205817A (JP '817; abstract only) in view of Landin et al.

Applicants' independent Claim 1 discloses a method for retrieving data, comprising: rotating a storage media having a substrate comprising at least one plastic resin portion and at least one data layer disposed on at least one surface of the substrate, wherein the substrate has a surface roughness of less than about 10Å and an axial displacement peak of less than about 500 μ under shock or vibration excitation; directing an energy field at the storage media such that the energy field is incident upon the data layer before it can be incident upon the substrate; and retrieving information from the data layer via the energy field.

Applicants have described the above references in detail in the Response to the Office Action dated March 27, 2003 ("OA Response"). For all of the reasons set forth in the OA Response, Applicants continue to contend that Landin et al., JP '921 (abstract only), Hirata et al., Yamashita et al., JP '817 (abstract only), Chang, and Wu et al. all, individually and in combination, fail to teach, suggest, or render obvious the present application. It appears to be the

Examiner's position that all properties that would improve a storage media, e.g., move it to the next generation, are obvious and that one of ordinary skill in the art would seek to obtain those media. Applicants disagree that advances in this technology are obvious, "necessarily present", "necessarily possessed", or are cause effective variables. As a car having a gas mileage of greater than 100 miles/gallon would not be obvious even though such a car is presently desired by consumers, environmental groups, and others. The knowledge that improved gas mileage is desired, it is not a "cause effective variable" or "necessarily present" in cars that are presently available, even though presently available cars have an engine, doors, wheels, a gas tank, an exhaust system, etc., and even though the present cars burn fuel.

As stated previously, Applicants have discovered many factors that effect the resultant media and by producing a media with a certain combination of factors, an improvement is obtained. For example, there is no reason or teaching of a specific resonant frequency, or of a first modal frequency of greater than an operating frequency, or modal frequenc(ies) of less than an operating frequency, and the Examiner fails to provide any reason why such elements would be obvious based upon the prior art.

For example, with respect to edge lift and axial displacement peak, the Examiner claims that these are "functional properties which *are necessarily possessed by each and every recording medium substrate.*" (Final OA, page 10) Applicants don't deny that a storage media will have an axial displacement peak or an edge lift height. However, having the property and having the claimed limitation are different. As with the other claimed properties, the Examiner merely contends that "there is no evidence of record that a composite substrate comprising at least one plastic resin portion will not necessarily result in properties meeting applicant's claimed limitations." (Final OA, page 10) Essentially, without a basis in technical reasoning, the position taken by the Examiner appears to be that any storage media having a plastic resin portion will have all of the presently claimed limitations. In an effort to show that merely having a property does not mean that the claimed limitation is "necessarily possessed", Applicants refer the Examiner to the article "*A Study on Spin Coating Method for Cover Layer of Blu-ray Disc,*" by Tae-Sik Kan et al., presented at the International Symposium on Optical Media, 2003 (pp. 298 – 299) (hereinafter "Kan et al."). In this document they discuss spin coating and issues of ski-jump (i.e., edge lift). The example provided is a polycarbonate substrate with a UV curable resin

having a thickness of  $100 \pm 2$  micrometers ( $\mu$ ) thereon. As is shown from Table 1, the edge lift ranges from  $6.2 \mu$  to  $54.3 \mu$  on a  $100 \mu$  thick coating. In other words, an edge lift of less than about  $8 \mu$  is not “necessarily possessed” by a storage media having at least one plastic portion. Merely because a storage media has a property does not mean that the media meets the claimed limitation. Clearly, as is supported by Kan et al., the media can have a variety of edge lifts, with edge lifts greater than  $50\mu$  considered “conventional” by Kan et al. in a presentation provided in 2003.

The claimed limitations of edge lift, axial displacement peak, and others (e.g., modal frequencies, areal densities, etc.), although “properties”, are not “necessarily possessed” by the storage media as is alleged by the Examiner. These properties are patentable features of the present application.

Additionally, Applicants continue to contend that other property limitations of the present media identified in the claims also add patentable matter. The media of the present application is different than the media of the cited references, even when they list elements such as substrates, data layers, etc. The properties are specific limitations that define a different, patentable media. For example, without proper design, the first modal frequency will not be outside of the operating frequency range. Additionally, a media can function with a first modal frequency less than or equal to the operating frequency. Having the first modal frequency greater than the operating frequency is not an inherent property of storage media, and, as appears from the references cited by the Examiner, not even an identified property.

The Examiner notes that “the rejection of record relies upon the position that a property would *necessarily be present*, not ‘*inherent*’.... (Final Office Action dated September 16, 2003, page 9 (“Final OA”); *emphasis added*) Applicants apologize for misconstruing the basis of the rejection and respectfully request that the Examiner clearly and distinctly specify the difference between “inherent” and “necessarily be present”, and also clarify the patentability standard that is applied to “necessarily be present” versus “inherent”.

With respect to areal density, the Examiner maintains that “areal density is a function of more than just the medium”. (Final OA, page 10) As previously stated, head – media separation is not part of the *definition of areal density*. “*Areal density*, also sometimes called *bit density*, refers to the amount of data that can be stored in a given amount of hard disk platter “real estate”.

Since disk platter surfaces are, of course, two-dimensional, areal density is a measure of the number of bits that can be stored in a unit of area (i.e., track per inch times bits per inch). As is taught throughout the present application, obtaining the desired areal density is a function of various properties and combinations of those properties; i.e., there is a *structural difference* that enables a greater areal density. For example, that is why a much greater storage density is obtained on a compact disc than a floppy disc. The properties are different enabling a different density. Applicants contend that the storage densities do add patentable subject matter.

Applicants do not disagree that, in order to read a disc having a particular areal density, one must have a device capable of reading such density. However, we are not claiming the read/write device, we are claiming a media that is capable of supporting a certain amount of data; i.e., having a particular areal density. For example, if you look at one of your floppy discs, it will have, printed on the encasing, "1.44 MB"; i.e., an areal density of 1.44 megabytes. The areal density refers to what the *media is capable of supporting*. Applicants are not herein claiming the read device (read head, wiring, integrated circuit...), and do not deny that an appropriate device is needed to read a media having a particular areal density. However, that does not change the fact that the media can have that areal density; i.e., be capable of supporting a particular amount of data in a given area.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). The above cited references do not teach or suggest a surface roughness of less than about 10 Å and an axial displacement peak of less than about 500 μ for a storage media comprising a plastic resin portion. The property limitations in Claim 1 as well as in the dependent claims are not "necessarily possessed" and do add patentable matter. For the reasons set forth in the OA

Response, as well as the arguments set forth above, the obviousness rejections are improper. The present claims are non-obvious over the art of record, alone and in combination.

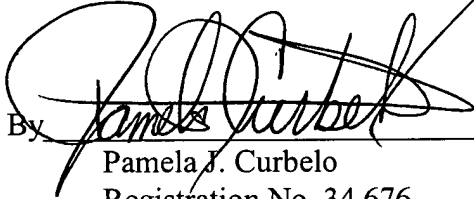
Applicants have identified several characteristics, including axial displacement, roughness, edge-lift tilt, mechanical damping coefficient, moment of inertia, specific gravity, resonant frequency, first modal frequency, and the like, as well as designs (e.g., core designs) which enables further advancement of the storage media technology. The references of record, alone and in combination, in many instances, fail to teach or suggest the significance or presence of these features and/or designs. Even if the understanding of the industry of these, and other features, has changed since the time of the present invention, such change does not effect the patentability of the present application; patentability is determined at the time of the present application, not in hindsight from the teachings of the present application or from the general desires of the technology or industry today. In other words, merely because a feature or characteristic may appear desirable today does not mean or even suggest that it was desirable, understood, considered, or inherent at the time of the present application. For example, there is no reason or teaching of a specific resonant frequency, or of a first modal frequency of greater than an operating frequency, or modal frequency(ies) of less than an operating frequency, and the Examiner fails to provide any reason why such elements would be obvious based upon the prior art.

It is believed that the foregoing amendments and remarks fully comply with the Final Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the rejections and allowance of the case are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0862.

Respectfully submitted,

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Date: November 17, 2003  
Customer No.: 23413